Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:

Multi beam bathymetry and backscatter synthesis for the Main Hawaiian Islands (5 meter resolution)

1.2. Summary description of the data:

The Hawaii deep-slope bottomfish fishery preferentially targets seven high value species (i.e. six snappers and one grouper, hereafter referred to as Deep7) and represents the major insular commercial fishery in the state. The NOAA Pacific Islands Fisheries Science Center (PIFSC) Stock Assessment Program (SAP) is responsible for regularly assessing this stock.

To augment and improve the data used in the Deep7 assessment, PIFSC began developing a multi-gear Bottomfish Fishery-Independent Survey (BFISH) for the Deep7 stock in the Main Hawaiian Islands (MHI) in 2011 (Richards et al., 2016). Benthic habitat has been shown to play a key role in determining the spatial distribution of demersal living marine resources (Richards et al., 2012). The BFISH survey employs a stratified random sampling design based on depth and habitat.

Prior to the work presented here, the lack of usable backscatter data across the entire MHI domain was a major impediment to the development of a properly stratified operational fishery-independent survey covering the full domain of the stock. While backscatter data had been collected throughout the MHI, these data were collected using various platforms and sensors such that numeric backscatter values from disparate areas did not represent similar levels of substrate hardness. This precluding development of a comprehensive survey stratification across the MHI domain of the Deep7 stock.

To remedy this situation, the NOAA Pacific Islands Fisheries Science Center conducted a one-year project to create comprehensive, high-resolution, synthesized depth, slope, and seafloor hardness maps and GIS layers for the Main Hawaiian Islands. This paper describes that effort in two parts:

1. Part I: Methods and results pertaining to the development of a 5-meter resolution Main Hawaiian Islands bathymetric and backscatter synthesis covering depths of 75 to

400 m;

2. Part II: Novel methods and results associated with the use of these newly created synthesis data in quantitatively defining effective habitat strata ratification for the NOAA PIFSC Bottomfish Fishery-Independent Survey in Hawaii (BFISH).

1.3. Is this a one-time data collection, or an ongoing series of measurements?
One-time data collection

1.4. Actual or planned temporal coverage of the data:
2015-10-01 to 2016-04-30

1.5. Actual or planned geographic coverage of the data:
W: -160.7, E: -154.7, N: 22.3, S: 18.7
Main Hawaiian Islands

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Map (digital)

1.7. Data collection method(s):
(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)
Instrument: multibeam bathymetry and backscatter
Platform: Research vessel
Physical Collection / Fishing Gear: multibeam bathymetry and backscatter

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
Benjamin L Richards

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
benjamin.richards@noaa.gov

2.5. Phone number:
(808)725-5320

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

Brent M Miyamoto

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

Unknown

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:
Data was collected in the field by PIFSC staff using shipboard acoustic instruments.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

QC after data collection.

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

Yes

6.1.1. If metadata are non-existent or non-compliant, please explain:

6.2. Name of organization or facility providing metadata hosting:
NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:
https://www.fisheries.noaa.gov/inport/item/31636

6.4. Process for producing and maintaining metadata
(describe or provide URL of description):
Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access
NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?
No

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?
No

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:
None

7.2. Name of organization of facility providing data access:
Pacific Islands Fisheries Science Center (PIFSC)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
http://www.soest.hawaii.edu/HMRG/multibeam/backscatter.php

7.3. Data access methods or services offered:
http://www.soest.hawaii.edu/HMRG/multibeam/backscatter.php

7.4. Approximate delay between data collection and dissemination:
1 Year

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)
NCEI_MD

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
Pacific Islands Fisheries Science Center - Honolulu, HI

8.3. Approximate delay between data collection and submission to an archive facility:
1 Year

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?
Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection
Data reside on PI's federal computer. Regularly scheduled backups are performed.

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.